

reduced set of features than said fuller functional station has, and said first heterogeneous element provides a service to said second heterogeneous element so that the output of said second heterogeneous element approximates that of [[a]] said fuller functional [[stations]] station.

[[2002.]] 43. (currently amended) The method of [[2001]] 42, wherein said lesser functional station is equipped to send a [[CAS]] Contextual Addressing Scheme message but cannot receive a [[CAS]] Contextual Addressing Scheme message.

[[2003.]] 44. (currently amended) The method of claims [[2000-2002]] 42 or 43, wherein said [[filler]] fuller functional station is fully time sentient and said lesser functional station is limited time sentient, where fully time sentient means said fuller functional station has a clock that is coordinated with the time of a third station, and said limited functional station has a clock that cannot be so coordinated.

[[2004.]] 45. (currently amended) The method of claims [[2000-2003]] 42 or 43, wherein said lesser functional station inherits a Contextual Attribute from its custodial, fuller functional station.

[[2005.]] 46. (currently amended) The method of claims [[2000-2004]] 42 or 43, wherein said fuller functional station has a back-up battery and the lesser functional station does not have a back-up battery.

[[2006.]] 47. (currently amended) The method of claims [[2000-2005]] 42 or 43, wherein each station is time-sentient.

[[2007.]] 48. (currently amended) The method of claims [[2000-2006]] 42 or 43, wherein the time-sentence of one station means that it has an internal counter that [[does not]] cannot coordinate with the time outside the station, and the time-

sentence of a second station means that it has an internal counter that does coordinate with time outside itself.

100. (withdrawn) A method of creating multi-dimensional identities for a network of stations, comprising the steps of: (a) ascribing to each station, its own Contextual Attributes; (b) sending a function to each station that is operable on each station's Contextual Attributes; and (c) each station receiving said function and determining its identity by using said function on its Contextual Attributes.

101. (withdrawn) The method of claim 100, wherein "step (b) function" uses one of {Boolean, linear, non-linear and fuzzy} logic.

102. (withdrawn) The method of claims 100-101, wherein "step (b) function" is Business-motivated.

103. (withdrawn) The method of claims 100-102, wherein said sending step is a broadcast of a single function to all stations.

104. (withdrawn) The method of claims 100-103, further comprising a communication proxy, wherein said sending step uses said communication proxy.

105. (withdrawn) The method of claims 100-104, wherein the network operates on IP protocol and "step (c) sending" is a multicast using IP protocol.

106. (withdrawn) The method of claims 100-105, wherein the network is organized according to the topology of a tree and the station that is sending the function, is at the root of the tree and the other stations are at the branches of the tree.

107. (withdrawn) The method of claims 100-106, wherein the network is organized according to the topology of a ring.

108. (withdrawn) The method of claims 100-107, wherein the network is organized according to the topology of a common bus shared among the stations.

109. (withdrawn) The method of claims 100-108, wherein said sending step is implemented by wireless RF technology.

110. (withdrawn) The method of claim 104, wherein said sending step is implemented by: (i) a first communications protocol used between the Inquisitor Station and said communication proxy and (ii) a second communications protocol used between said communication proxy and said receiving stations.

112. (withdrawn) The method of claims 100-111, wherein each receiving station includes Interaction Module.

113. (withdrawn) The method of claims 100-112, wherein one said Contextual Variable is Business-motivated ("Business Contextual Variable").

114. (withdrawn) The method of claims 100-113, wherein said Business Contextual Variable relates to the user of the Inquisitee Station's Interaction Module (e.g. billing plan, ownership).

115. (withdrawn) The method of claims 100-114, wherein said Business Contextual Variable relates to a metric measured by the Inquisitee Station's Interaction Module (e.g. voltage levels).

116. (withdrawn) The method of claims 100-115, wherein said Business Contextual Variable relates to the network environment of the Inquisitee Station's Interaction Module.

117. (withdrawn) The method of claims 100-116, wherein said Business Contextual Variable relates to time obtained from elsewhere in the network.

118. (withdrawn) The method of claims 100-117, wherein one said Contextual Variable is Manufacturer-motivated ("Manufacturer Property").

119. (withdrawn) The method of claims 100-118, wherein said Manufacturer Property relates to infrastructure aspects of the receiving station (e.g. firmware version, hardware version, Device Type, "network ID").

120. (withdrawn) The method of claims 100-119, wherein "step (d) processing" of payload, is performed immediately upon receiving station determining that it has the sought identity ("thereupon")

121. (withdrawn) The method of claims 100-120, wherein "step (d) determining", is performed after a Business-motivated delay.

122. (withdrawn) The method of claims 100-121, wherein said Business-motivated delay is expressed by the received CAS message (e.g. Contextual Variable with desired value therefor).

123. (withdrawn) The method of claims 100-122, wherein among the receiving stations, there is a fuller functional receiving station and a lesser functional receiving station, wherein said fuller functional receiving station provides a service to the lesser functional receiving station so that the output of said lesser functional receiving station approximates that a fuller functional receiving stations from the point of view of the remainder of the network.

124. (withdrawn) The method of claims 100-123, wherein said lesser functional receiving station is equipped to send a (non-Contextual) message but cannot receive a (non-Contextual) message.

125. (withdrawn) The method of claims 100-124, wherein said lesser functional receiving station has a clock that cannot be coordinated with a clock employed elsewhere in the network.

126. (withdrawn) The method of claims 100-125, wherein said lesser functional receiving station inherits a Contextual Attribute from its custodial, fuller functional receiving station.

127. (withdrawn) The method of claims 100-126, wherein one receiving station is supported by two businesses and has Business Contextual Attributes for each said businesses respectively manipulable by each said business.

128. (withdrawn) The method of claims 100-127, wherein said CAS message is implemented at one layer when viewed relative to the OSI frame of reference.

129. (withdrawn) The method of claims 100-128, wherein said CAS message is implemented partially at a first layer and partially at a second layer, when viewed relative to the OSI frame of reference.

1000. (withdrawn) A method of achieving a desired complex action on an operating environment, comprising: (a) establishing a communications network having a Base Station and a plurality of endpoints, each endpoint engaging interaction means for interacting with the operating environment and each endpoint having identity-creating means for creating its identity; (b) developing a desired complex action in terms of individual actions by relevant interaction means; (c) sending to all endpoints, a message that is an expression of the desired complex action whereby the identities of the relevant said interaction means, are derived (i) by each endpoint's said identity-creating means (ii) from said expressed desired complex action.

1001. (withdrawn) The method of claim 1000, wherein each said endpoint has action-deriving means for deriving its appropriate individual action to perform as part of the desired complex action, and said appropriate individual action to perform, is derived (i) by each relevant endpoint (ii) from said expressed desired complex action.

1002. (withdrawn) The method of claim 1001, wherein said identity creation is performed by an endpoint upon its receipt of said message.

1003. (withdrawn) The method of claims 1000-1002, wherein said individual action derivation is performed by an endpoint upon its receipt of said message.

1004. (withdrawn) The method of claims 1000-1003, wherein said step of developing a desired complex action includes developing a plurality of Contextual Variables and a Contextual Function operative on said Contextual Variables, that assist in identifying the said relevant endpoints for the desired complex action.

1005. (withdrawn) The method of claims 1000-1004, wherein said message has said Contextual Function, and said endpoint's identity-creating means has its Contextual Values ascribed for said Contextual Variables for form its Contextual Attributes, and each said endpoint uses received message's Contextual Function on its Contextual Attributes to create its identity.

1006. (withdrawn) The method of claims 1000-1005, wherein said Contextual Function also has a sought identity and said endpoint determines if its created identity matches the received message's Contextual Function's sought identity.

1007. (withdrawn) The method of claims 1000-1006, wherein said interaction means includes a sensor for measuring a physical aspect of the operating environment.

1008. (withdrawn) The method of claims 1000-1007, wherein said interaction means includes an effector for affecting a physical aspect of the operating environment.

1009. (withdrawn) The method of claims 1000-1008, where one Contextual Variable is business-motivated (Business Contextual Attributes).

1010. (withdrawn) The method of claims 1000-1009, wherein one Contextual Variable is manufacturer-motivated (Manufacturer Properties).

1011. (withdrawn) The method of claims 1000-1010, further comprising the step of ascribing a Contextual Value to said Business Contextual Variable of an endpoint.

1012. (withdrawn) The method of claims 1000-1011, further comprising the step of ascribing a Contextual Value to said Manufacturer Properties of an endpoint.

1013. (withdrawn) The method of claims 1000-1012, wherein step of ascribing is implemented by the interaction of the endpoint's interaction means with the operating environment.

1014. (withdrawn) The method of claims 1000-1013, wherein step of ascribing is implemented by the interaction of the endpoint's interaction means with its network environment.

1015. (withdrawn) The method of claims 1000-1014, wherein the operating environment is dynamic with the passage of time, and so potential identities that

can be created, accordingly change with the passage of time.

1016. (withdrawn) The method of claims 1000-1015, wherein one Contextual Variable relates to exogenous or endogenous aspects.

1017. (withdrawn) The method of claims 1000-1016, wherein a Contextual Variable relates to time.

1018. (withdrawn) The method of claims 1000-1017, wherein said network environment includes time of another station, and includes coordinating time therewith.

1019. (withdrawn) The method of claim 1000-1018, wherein said another station is the Base Station which keeps network time.

1020. (withdrawn) The method of claims 1000-1019, wherein said message has a payload and upon the match of sought identity and endpoint's created identity, said endpoint processes said payload.

1021. (withdrawn) The method of claims 1000-1020, wherein said payload is instructions for the sensor to sense.

1022. (withdrawn) The method of claims 1000-1021, wherein said payload is instructions for the effector to do a prescribed individual action or cease to do a prescribed individual action that affects the operating environment.

1023. (withdrawn) The method of claims 1000-1022, wherein said payload is instructions to change a specified Contextual Value.

1024. (withdrawn) The method of claims 1000-1023, wherein said payload is instructions to delete a specified Contextual Variable.

1025. (withdrawn) The method of claims 1000-1024, wherein said payload is instructions to add a specified Contextual Variable.

1026. (withdrawn) The method of claims 1000-1025, wherein said payload includes a self-executing function for the station to activate.

1027. (withdrawn) The method of claims 1000-1026, wherein said step of sending a message, uses a communication proxy.

1028. (withdrawn) The method of claims 1000-1027, wherein said message is sent by the Base Station in a first protocol and the message is received by all endpoints in a second protocol and said communication proxy serves as a protocol converter for converting between said protocols.

1029. (withdrawn) The method of claims 1000-1028, wherein said payload function is one of {Boolean, linear/non-linear, etc.}

1030. (withdrawn) The method of claims 1000-1029, wherein the operating environment includes an electric power grid and said physical aspect relates to electricity on the grid line that said interaction means is attached to.

1031. (withdrawn) The method of claims 1000-1030, wherein said aspect is related to electricity voltage.

1032. (withdrawn) The method of claims 1000-1031, wherein said aspect is related to electricity current.

1033. (withdrawn) The method of claims 1000-1032, wherein said aspect is related to electricity phase.

1034. (withdrawn) The method of claims 1000-1033, wherein said effector is a remote disconnect switch.

1035. (withdrawn) The method of claims 1000-1034, wherein said step of sending a message is the one time sending of a single message.

1036. (withdrawn) The method of claims 1000-1035, wherein said identity/action creation is performed after a (prescribed) postponement after its receipt of said message.

1037. (withdrawn) The method of claims 1000-1036, further comprising a traditional addressing scheme to send a message between endpoints and Base Station.

1038. (withdrawn) The method of claims 1000-1037, wherein said Contextual Function has one of {Boolean, linear, non-linear and fuzzy} logic.

1039. (withdrawn) The method of claims 1000-1038, wherein the operating environment includes a physical consumable commodity that is consumable (e.g. water, gas, items in vending machine, items in a warehouse).

2000. (withdrawn) A method of homogenizing a network having a first heterogeneous element that produces a first output and a second heterogeneous element that produces a second output, comprising the step of providing a service to the second heterogeneous element to make its said first output appear to be of the same nature as said second output.

2001. (withdrawn) The method of claim 2000, wherein first heterogeneous element is a fuller functional station and said second heterogeneous element is a lesser functional station, and said first heterogeneous element provides a service

to said second heterogeneous element so that the output of said second heterogeneous element approximates that of a fuller functional stations.

2002. (withdrawn) The method of 2001, wherein said lesser functional station is equipped to send a CAS message but cannot receive a CAS message.

2003. (withdrawn) The method of claims 2000-2002, wherein said filler functional station is fully time sentient and said lesser functional station is limited time sentient, where fully time sentient means said fuller functional station has a clock that is coordinated with the time of a third station, and said limited functional station has a clock that cannot be so coordinated.

2004. (withdrawn) The method of claims 2000-2003, wherein said lesser functional station inherits a Contextual Attribute from its custodial, fuller functional station.

2005. (withdrawn) The method of claims 2000-2004, wherein fuller functional station has a back-up battery and the lesser functional station does not have a back-up battery.

2006. (withdrawn) The method of claims 2000-2005, wherein each station is time-sentient.

2007. (withdrawn) The method of claims 2000-2006, wherein the time-sentience of one station means that it has an internal counter that does not coordinate with the time outside the station, and the time-sentience of a second station means that it has an internal counter that does coordinate with time outside itself.

3000. (withdrawn) A method of "Plug & Play" for associating an un-associated WAN/LAN Device to a network having a Base Station, comprising the steps of: (a) the Base Station creating and sending an Association Beacon; (b) the un-associated WAN/LAN Device scanning for said Base Station-derived Association Beacons and upon detecting one, sending back a WAN Association Request message.

3001. (withdrawn) The method of claim 3000, wherein said Association Beacon has a Business ID with a list of time slots during which said WAN Association Request can be sent back.

3002. (withdrawn) The method of claim 3000, wherein the number and duration of time slots in said list, is dynamically determined, based on past experience (e.g. as function of traffic, dropped communications links).

4000. (withdrawn) A method of "Plug & Play" for associating an un-associated LAN Device to a network having one or more associated LAN Devices, one of which is attached to a WAN portal to a Base Station-centric WAN, comprising the

steps of: (a) each associated LAN Device sending Association Beacons; (b) the un-associated LAN Device scanning for said LAN Device-derived Association Beacons and selecting the best associated LAN Device to associate with; (c) the un-associated LAN Device sending a LAN Association Request to said selected best associated LAN Device.

4001. (withdrawn) The method of claim 4000, wherein said selecting step is based on consideration of received communications quality characteristics from LAN Association Beacons from each said associated LAN Devices.

4002. (withdrawn) The method of claims 4000-4001, wherein each associated LAN Devices has a resource metric indicative of its ability to handle more communication traffic, and said selecting step is based on said resource metric.

4003. (withdrawn) The method of claims 4000-4002, wherein said resource metric includes a factor among {the number of LAN Devices it is routing for, its distance from its WAN Portal}.

4004. (withdrawn) The method of claims 4000-4003, where the intelligence for selecting which LAN Device to associate with, is mainly at the Base Station.

4005. (withdrawn) The method of claims 4000-4004, wherein candidate LAN Devices are provided to the Base Station, each with certain information useful for selecting the best LAN Device, and the Base Station selects.

4006. (withdrawn) The method of claims 4000-4005, where the intelligence for selecting which LAN Device to associate with, is mainly at the un-associated LAN Device.

4007. (withdrawn) The method of claims 4000-4006, wherein the un-associated LAN Device choses based on immediate physical communication metrics (topological efficiency, resource indicator metrics).

4008. (withdrawn) The method of claims 4000-4007, wherein the only addressing scheme is that of claims 1-129 (i.e. without Traditional Addressing).

5000. (withdrawn) The method of claims 1-4008, wherein upon a WAN/LAN Device finding itself in a state of dis-association, comprising the re-performance the steps of association in claim 3000 and following.

5001. (withdrawn) The method of claim 5000, wherein upon a LAN Device finding itself in a state of dis-association, comprising the reperformance of the steps of association in claim 4000 et seq.

5002. (withdrawn) The method of claims 1-5001, wherein regulation of access by stations to the communications medium is accomplished by assigning

orthogonal channels to each station.

5003. (withdrawn) The method of claim 5002, where the un-associated LAN Device has a Manufacturer-motivated Operating LAN Communication Channel and sends said LAN Association Beacon thereon.

5004. (withdrawn) method of claim 5003, wherein the plurality of Operating LAN Communication Channels are processed to be orthogonal to each other.

6000. (withdrawn) For a network of stations having a Base Station, wherein each station sends messages to the Base Station and the process of sending requires power, and each station has a clock and persistent memory, a method of recovering the state of the network, upon power resumption after a power disturbance, comprising the steps of: each station, while powered, (a) keeps in said memory, a copy of each message after it is sent; (b) indicates on that copy its status as being sent; (c) time-stamps, based on its clock, each copy with its time of sending (d) upon the occurrence of power disturbance and then power resumption, sending to the Base Station, each said sent copy of time-stamped messages and the Base Station re-assembling the messages in chronological order based on time-stamps of received messages (and deleting duplicates)

6001. (withdrawn) The method of claim 6000, wherein said clock re-starts at the time it had upon power disturbance and continues until it is able to be coordinated with network time.

6002. (withdrawn) The method of claims 6000-6001, wherein said clock is coordinated with network time.

6003. (withdrawn) The method of claims 6000-6002, wherein, during the process of re-assembling, if the Base Station deduces that a message is missing, querying the relevant station to resend the missing sent messages.

6004. (withdrawn) The method of claims 6000-6003, wherein said step of keeping in said memory is organized in the form of a circular buffer where the oldest message is overwritten by the most recent message sent/to be sent.

7000. (withdrawn) The method of the above claims, further comprising reporting by LAN Devices by PQM/AMR reporting (scheduled) or upon an "alarm" condition (unscheduled).

8000. (withdrawn) For a network of stations, a method of effecting a desired complex action by each of a subset of stations, comprising the steps of: (a) developing agents that have the functionality for locating each said target station and for effecting desired action; (b) distributing said agents to locate the stations of the relevant subset; and (c) having those agents who located the subset, to effect the desired action.

REMARKS/ARGUMENTS

In addition to the amendments responsive to the Examiner's suggestions, objections and rejections, discussed below, Applicant made voluntary amendments in amended (renumbered) claims 41, 42, 44, 46, and 48 in the nature of small editorial changes involving no new matter.

INFORMATION DISCLOSURE STATEMENT

A copy of the document WO04/00426 is being submitted under separate cover.

SPECIFICATION

The title has been amended to – "Communications system of heterogeneous elements".

CLAIM OBJECTIONS

Misnumbered claims 2000-2007 have been renumbered 41-48, as suggested by the Examiner.

The objected-to multiple dependencies and formats of dependencies, have been corrected in the amended claims.

CLAIM REJECTIONS UNDER 35 USC §112 (SECOND PARAGRAPH)

Claim 2000.

The Examiner thought that "of the same nature" was indefinite. Amended (renumbered) claim 41, recites "of the same sentient nature". Applicant believes this terminology to be definite for the following reasons.

The common, ordinary meaning of "sentient" is along the lines of "capable of sensation and/or perception". For the purposes of the present application, a network element or station may be capable of sensing phenomena around it. The phenomena may exist at all levels of interaction. An example of a low level of interaction where the nature of sensation is disturbances of the surrounding electromagnetic fields, there may be the capability for sensing electromagnetic (i.e. wireless) signals, and for "understanding" or perhaps processing them into (higher levels) of information for further use (i.e. wireless signals that modulate a message that indicates the passage of time or data/instructions from a central controller). At different levels and in respect of different natures of interaction, there may be capability for sensing motion, temperature, water levels, mechanical tilts, voltages and the number of pop cans remaining in a vending machine, and the entire range of physical attributes found in homes, factories and the environment. In the preceding, the complements of "capability" are

incapability and partial capability. More generally, there are thus degrees of, and natures of, sentience of a station.

Support for the amendment to add "sentient" is found in the examples of "time-sentient" stations (see, for examples, para [0089] and paras [0524] to [0552]) and the output of a "deaf" station (i.e. of a station that has only transmitter capability but without receiver capability for wireless signals) can "appear" to come from a ("hearing/speaking") fully (wireless) sentient station and that is because the output from the "deaf station" is "helped" by the services of the "hearing/speaking" station.

Thus, "same sentient nature" means, for the purposes of the present invention, that the output of the second station can be made to appear to have come from the first station, as if the second station had the same "sensing capabilities" as the first station. Amended (renumbered) claim 41 (corresponding to previously numbered claim 2000) has been amended to reflect the preceding.

Claim 2000.

The Examiner thought that "its" (line 4) lacked antecedent basis. In amended (renumbered) claim 41, that term has been deleted.

Claim 2001.

The Examiner thought that the terms "fuller functional station" and "lesser functional station" were indefinite, and that claim 2003 was sufficiently definite in respect of those terms.

Applicant respectfully requests reconsideration for the following reasons.

As explained in the specification (starting at para [0522]):

"In realistic network implementations....not all parts of a network have identical functionality. Some devices are "smarter" or fuller functional compared with "lesser functional" ones having a reduced feature set. The "lesser functional", relative to the "fuller functional", might have, for examples, less memory and processing capability, transmit-only instead of transceiver capability, and no battery backup.

The heterogeneous nature of realistic networks makes it difficult to achieve certain management functions. For example, if all network elements do not have functionality to be synchronized to Network Time, then it is difficult to observe accurately the status of the entire network (i.e. all elements) at a given (Business-motivated) point in time (e.g. the voltage level at all customer locations at a certain time).

Two examples of heterogeneity and this invention's attempt to "homogenize", are explained below: (1) transmit-only capability in network

where other elements have transceiver capability, which affects (upstream) Time-Sentient messages and (downstream) addressing; and (2) not having battery backup in a network where other elements do, which affects the power outage reporting."

The specification continues (at para [0525]) with the two examples where "heterogeneous elements" are described in some detail in terms of their respective capabilities or functionalities.

Reflecting the preceding, amended (renumbered) claim 42 recites with more particularity the relative terms of "fuller" and "lesser" in terms of "reduced feature set". Such concept and terminology is well-established in the field of technological devices, ranging from consumers at the hardware level (e.g. a model of a microprocessor having a reduced set of micro-instructions relative to another model having a fuller set) to consumers at the retail level (e.g. a PDA having a set of music features and a "lite" or "junior" version of the PDA having a smaller set). The terminology of "reduced feature set" sets a standard for which there is no difficulty in ascertaining the requisite degree of "lesser" and "fuller" for those in the relevant art.

Claim 2002.

The Examiner thought that the term "CAS message" (line 2) was indefinite, and suggested that the full term "Contextual Addressing Scheme" be recited for the abbreviation CAS, be recited in the claim. Amended (renumbered) claim 43 has the suggested recitation.

CLAIM REJECTIONS UNDER 35 USC §102

Claims 2000 and 2001 were rejected as being anticipated by the reference, **Mills**. The Examiner thought that in **Mills**, "one of the primary time servers may be interpreted a "first heterogeneous element" and one of the secondary time servers may be interpreted a "second heterogeneous element" and the outputs they produce are Network Time Protocol Messages as described briefly on page 1484, right column, section "III. Network Time Protocol"), comprising the step of providing a service to the second heterogeneous element to make its said first output to be of the same nature as said second output (page 1485, left column, lines 5-10, during synchronization between primary and secondary time servers, the secondary time servers output (i.e. NTP messages with other devices will synchronize to) will be synchronized with the primary time server's output).".

Applicant respectfully requests reconsideration for the following reasons.

Applicant does agree with the Examiner that the description of Network Time Protocol Messages on page 1484, right column, section "III. Network Time Protocol", is indeed "brief". Applicant cannot even find the word "message" in the cited passage, although it is implicit that messages of some nature and content,

are contemplated. Without a clarification of the precise nature and content of those NTP messages from the "second heterogeneous element"/"secondary time sever" that the Examiner thinks are "of the same nature as the "first heterogeneous element"/"primary time sever", Applicant cannot meaningfully comment. That said, and on a without prejudice basis pending Examiner's clarification, Applicant notes (1) the statement (on page 1485, lines 2-3), "Since only a single NTP message format is used..." and (2) FIG. 4 (on page 1487, left column), and so concludes *arguendo* that the outputs of both primary and secondary time servers are always of the same nature – each must be in the format of FIG. 4, and the only difference between them can only be the value(s) of certain fields that are used for the relevant processes and nodes to synchronize their clocks to the "external reference source such as timecode receivers".

For the above reasons, Applicant submits that claim 2000 does not read on **Mills**.

Further, in respect of claim 2001, the Examiner thought that **Mills** "discloses the first heterogeneous element is a fuller functional station and said second heterogeneous element is a lesser functional station (page 1485, left column, lines 5-10, primary time servers communicate directly with "external sources, such as timecode receivers", while secondary time servers do not)...the output of said second heterogeneous element approximates that of a fuller functional station....".

Applicant respectfully requests reconsideration for the preceding reasons (for claim 2000). Since claim 2001 depends on claim 2000, those reasons apply equally to claim 2001. Furthermore (and again, on a without prejudice basis pending Examiner's clarification of a NTP message), Applicant submits *arguendo* there is no concept of "approximating" in **Mills** because all primary and secondary time servers output NTP messages independently of a particular input that primary time servers receive.

For the above reasons, Applicant submits that claim 2001 does not read on **Mills**.

CLAIM REJECTIONS UNDER 35 USC §103

Claim 2002 was rejected as being unpatentable over **Mills** in view of **Carzaniga**. The Examiner thought that **Mills** "does not disclose said lesser functional station is equipped to send a CAS message but cannot receive a CAS message" but that **Carzaniga** "discloses content-based addressing and content based address messages in a networked environment (Abstract)", and that it would have been obvious "to combine the teachings of **Mills** and **Carzaniga** in order to utilize a known addressing format for an existing event notification service i.e. **Mills** network time protocol)."

Applicant respectfully requests reconsideration for the following reasons.

The Examiner considered that the Abstract in **Carzaniga** "discloses content-based addressing and content based address messages in a networked environment". The Abstract asserts its new approach "...performs routing based on the data being transported in a message rather than on any specialized addressing and routing information attached to, or otherwise associated with, the message." The explanation continues (under Introduction, page 1, first para), "Traditional addressing and routing mechanisms...are based on the use of explicit and specialized addressing and routing information attached to, or otherwise associated with, messages. The actual data contained within messages, referred to as *content* or sometimes *payload*", are typically invisible to the transport mechanism and, therefore, are not considered when performing addressing or routing operations". (italics in the original)

In contrast, the present invention performs routing but not based on data (or content or payload, as those terms are meant in **Carzaniga**). As shown in FIG. 2, (idealized) Contextual Addressing Scheme (CAS) message format of [PREAMBLE] [CONTEXTUAL FUNCTION][PAYLOAD][ERROR CORRECTION] the present invention performs routing based on a "Contextual Function" that is discrete and very distinct from "Payload" in its CAS message.

As seen in comparison with FIG. 1, showing (idealized) Traditional Message format of [PREAMBLE] [SOURCE/DESTINATION][PAYLOAD][ERROR CORRECTION]), the "Contextual Function" of the CAS message (of FIG. 2) performs a role that is an improvement (and in fact, Applicant submits, is a radically different improvement) over the "Source/Destination" address of a Traditional Message. But in either message formats, the "payload" is discrete and distinct from the "address" parts of the message.

Furthermore, the present invention contemplates a "payload" that is quite distinct from its CAS addressing scheme. The specification explains (at para [0062]): "... a typical CAS message has a Contextual Function (having at least Contextual Variables that are related in a way relevant to the sought identity) and a Payload. A CAS Inquisitor Station has its Contextual Attributes (being those Contextual Variables holding its Contextual Values therefor). When the CAS message encounters the Inquisitor Station's Contextual Attributes (and in particular, when the CAS message's Contextual Function is processed by the Station on its Contextual Attributes), that Station is Contextually Addressed thereby."

Then (starting at para [0175]):

"The term "payload" herein refers to information that the CAS Inquisitor Station, in order to effect the desired complex action, wants the sought CAS Inquisitor Station to have and act on. The payload can be either data

to be processed or a function for processing data or both, and herein is called "instructions" for economy of expression.

To illustrate the flexibility and responsiveness of the CAS, three different, exemplary types of payloads are explained next for a sought CAS Inquisitee Station.


Type A Payload. The payload is instructions for the sensor-Interaction Module, to measure a specified physical aspect of the operating environment and to send the measurement back to the Base Station.

Type B Payload. The payload is instructions for the effector-Interaction Module, to do a specified act or to stop doing a specified act. As the Contextual Function CF3 fuzzy logic example above showed, in a message with a payload to terminate power, all stations that are unexpectedly drawing too much power and whose customers are credit risky, will have their power terminated immediately. This would be helpful to manage emergency power situations where instant responsiveness is required.

Type C Payload. The payload is instructions to manipulate the Contextual Attributes with a conventional action (like "put, remove, view and change") in respect of (a) the Contextual Value of a Contextual Variable and (b) the Contextual Variable itself."

The terms "payload" and "Contextual Addressing" of the present application thus understood, Applicant submits that **Carzaniga's** "content-based addressing" does not read on the "CAS message" of amended (renumbered) claim 43.

Respectfully submitted,


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June 17, 2009

Attach. Copy of the document WO04/00426 sent under separate cover